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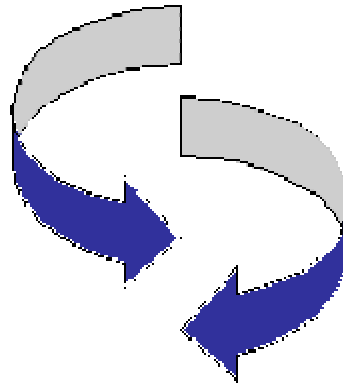
# General Specifications for Aeronautical Surveys

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## Volume IV Exchange File Format

Version 3.0 , September 2003

<http://www.ngs.noaa.gov/AERO/aero.html>



Federal  
Aviation  
Administration



National  
Oceanic and  
Atmospheric  
Administration



National  
Geodetic  
Survey

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## **1. Exchange File Overview**

The Exchange File Format is a users guide for preparing and submitting data for storage in the National Geodetic Survey Obstruction Chart Database (OCDB). It provides in detail the format and structure of every field allowable by the OCDB. Also included are dependencies, field widths, record order requirements and field choice lists.

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## **2. Record Format**

The following sections describe all the possible records found in an Exchange File. These sections are broken down by record and then by field. Each field is further broken down by: description, position, range, format, and example. All records have the same basic structure. All records contain at most 132 characters. They consist of a variable number of fields. Each field has a corresponding existence code. The existence flags and their positions are defined in Appendix B. The field format contains a special symbol defined below.

<b>A</b>	Alphabetic capital or lowercase characters only (A-Z)
<b>9</b>	Numeric and sign only (0-9, +, -, .)
<b>X</b>	Alphanumeric, sign and decimal point

Note: All alphabetic and alphanumeric values shall be left justified and all numeric values shall be right justified, unless otherwise specified. All numeric distance and length values are in U.S. Survey Feet unless otherwise specified.

### **2.1 Identification Code**

Each record begins with a four character identification code. This code is broken down into two parts, the single alpha character General Data Category and the three digit numeric General Data Record Type.

#### **2.1.1 General Data Category**

The first character in column 1 is the general data category. All records for a given data category must be provided before the next category begins. There are eight valid data category codes:

<b>V</b>	Version Information
<b>A</b>	Airport Data
<b>R</b>	Runway Data
<b>F</b>	Feature Data
<b>P</b>	Poly Data
<b>C</b>	Chart Information
<b>L</b>	List Information
<b>T</b>	Task Information
<b>X</b>	End of File Record

Explanations of these categories will be given in further detail under the appropriate section for each category.

#### **2.1.2 General Data Record Type**

Characters 2-4 represent an integer value representing the data record for each category. If the first digit is a 3 through 9, the record is a standard series record. Otherwise it is a special format record. The following list contains the integer value range and the corresponding contents of the record:

<b>000-299</b>	Various Contents
<b>300</b>	Reference System Definition Codes
<b>400</b>	3D Positions With Date And Source
<b>500</b>	Distance And Elevation With Date And Source
<b>600</b>	Length And Width With Date And Source

<b>700</b>	2D Positions Without Date And Source
<b>800</b>	Value (Distance, Width, etc.) With Date And Source
<b>900</b>	Orthometric and Ellipsoidal Elevation With Date And Source

These data records are broken down into specific fields in sections 2.1.2.1 through 2.1.2.8.

#### **2.1.2.1 Various Contents (000-299)**

#### **2.1.2.2 Reference System Definition Codes (300)**

##### **Field 1: Reference System Code**

Description: Reference system in which the positions are expressed

Position: Columns 5-9

Range: None, value is always 0 (zero)

Format: 99999

Example: 0

##### **Field 2: Zone Code**

Description: Zone for the reference system

Position: Columns 10-14

Range: None, value is always 0 (zero)

Format: 99999

Example: 0

##### **Field 3: Horizontal Unit Code**

Description: Units in which positions are expressed.

Position: Columns 15-19

Range: Currently only:

5 DMS (degrees, minutes, seconds)

Note: Additional codes will be added in the future only if modifications to the OC Database allow for positions in units other than DMS.

Format: 99999

Example: 5

##### **Field 4: Horizontal Datum Code**

Description: Year of datum in which positions are expressed

Position: Columns 20-24

Range: Year of Datum, 27 or 83

Format: 99999

Example: 27

##### **Field 5: Vertical Unit Code**

Description: Units in which elevations and distances are expressed

Position: Columns 25-29

Range: Currently only:

1 U.S Survey Feet

Note: Additional unit codes will be added at some point in the future only if modifications to the OC Database allow for elevations and distances in units other than U.S Survey Feet

Format: 99999

Example: 1

**Field 6: Vertical Datum Code**

Description: Datum in which elevations are expressed

Position: Columns 30-34

Range: 29, 88, 9001 or 9003

Format: 99999

Example: 29

**2.1.2.3 3D Positions (400)**

**Field 1: Longitude**

Description: Longitude where sign represents hemisphere

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

$-180 < \text{DDD} < +180$

$0 \leq \text{MM} \leq 59$

$0 \leq \text{SS} \leq 59$

Example: -1235832.1281

**Field 2: Latitude**

Description: Latitude where sign represents hemisphere

Position: Columns 20-34

Range: -900000 to +900000, values south represented as negative

Format: DDMMSS.SSSS where

$-90 < \text{DD} < +90$

$0 \leq \text{MM} \leq 59$

$0 \leq \text{SS} \leq 59$

Example: 245328.7315

**Field 3: Elevation, Orthometric**

Description: Refer to the FAA NO. 405

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

**Field 4: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 382.289

**Field 5: Determined Date**

Description: Survey Date that data in this record was determined

Position: Columns 66-76

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month



yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 7: Source Code, Position**

Description: Specifies the source of position  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 8: Source Code, Elevation**

Description: Specifies the source of elevation  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.1.2.4 Distance and Elevation (500)**

**Field 1: Distance**

Description: Distance (real) from an endpoint  
Position: Columns 5-19  
Range: None  
Format: 9999999999.999  
Example: 72149.968

**Field 2: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 12138.325

**Field 3: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64  
Range: None  
Format: 9999999999.999  
Example: 14325.424

**Field 4: Determined Date**

Description: Survey Date that data in this record was determined

Position: Columns 66-76

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 5: Verified Date**

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 6: Source Code, Distance**

Description: Specifies the source of distance

Position: Column 90

Range: See Appendix B

Format: A

Example: D

**Field 7: Source Code, Elevation**

Description: Specifies the source of elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: F

**2.1.2.5 Length and Width (600)**

**Field 1: Distance**

Description: Distance (real) from runway endpoint

Position: Columns 5-19

Range: None

Format: 9999999999.999

Example: 1244.945

**Field 2: Width**

Description: Width (real) of runway

Position: Columns 20-34

Range: None

Format: 9999999999.999

Example: 324.376

**Field 3: Determined Date**

Description: Survey Date that data in this record was determined  
Position: Columns 66-76  
Range: None  
Format: dd-mmm-yyyy where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
Example: 18-DEC-1996

**Field 4: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
Example: 18-DEC-1996

**Field 5: Source Code, Distance**

Description: Specifies the source of distance  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 6: Source Code, Elevation**

Description: Specifies the source of Elevation  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.1.2.6 2D Positions (700)**

**Field 1: Longitude**

Description: Longitude where sign represents hemisphere  
Position: Columns 5-19  
Range: -1800000 to +1800000, values west represented as negative  
Format: DDDMMSS.SSSS where  
     $-180 < DDD < +180$   
     $0 \leq MM \leq 59$   
     $0 \leq SS \leq 59$   
Example: -1751119.1281

**Field 2: Latitude**

Description: Latitude where sign represents hemisphere  
Position: Columns 20-34  
Range: -900000 to +900000 values south represented as negative  
Format: DDMMSS.SSSS where

-90 < DD < +90  
0 <= MM <= 59  
0 <= SS <= 59  
Example: 245328.7315

#### **2.1.2.7 Value (Distance, Width, etc.) (800)**

##### **Field 1: Value (Distance, etc.)**

Description: Distance, width or other miscellaneous real value  
Position: Columns 5-19  
Range: None  
Format: 9999999999.9999  
Example: 1231.4433

##### **Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

##### **Field 3: Source Code, Value**

Description: Specifies the source of value  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

#### **2.1.2.8 Orthometric and Ellipsoidal Elevation (900)**

##### **Field 1: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 13245.786

##### **Field 2: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64  
Range: None  
Format: 9999999999.999  
Example: 14456.556

**Field 3: Verified Date**

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 4: Source Code, Elevation**

Description: Specifies the source of Elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: D

**2.2 Specific Data Records**

These records are specific to the three general data categories: Airport, Runway, and Feature. The first character represents which general category the record falls under. A - Airport, R - Runway, F - Feature, and P - Poly Feature. Like the General Data Record Type, characters 2-4 represent an integer value representing the data record for each category. If the second character is a 3 through 9, the record is a standard series record.

**2.2.1 Airport Specific Records**

The following records contain information about the airport.

**2.2.1.1 Airport Identification (A000)**

Note: This record must be present and should be the second record if there is a Version (V000) Record or the first record if there is no Version Record.

**Field 1: OC Number**

Description: National Geodetic Survey tracking number

Position: Columns 5-10

Range: 1 to 99999

Format: 999999

Example: 4367

Dependency: This record or the Airport ID is required

**Field 2: OC Edition**

Description: Most current

Position: Columns 11-16

Range: 1 to 99999

Format: 999999

Example: 6

**Field 3: Airport ID**

Description: Airport Identifier (refer to FAA ORDER 7350.\*\*, AS AMENDED)

Position: Columns 18-21

Range: None  
Format: AAAA  
Example: TWS  
Dependency: This record or the OC Number is required

**Field 4: Site ID**

Description: FAA Identification number  
Position: Columns 23-32  
Range: None  
Format: (10)X  
Example: 04508.A

**Field 5: Previous Airport ID**

Description: The previous Airport Identifier (if applicable)  
Position: Columns 34-37  
Range: None  
Format: AAAA  
Example: CNW

**2.2.1.2 Airport Name (A010)**

**Field 1: Name**

Description: Name of Airport on Survey Date  
Position: Columns 6-75  
Range: None  
Format: (70)A  
Example: Baltimore Washington International Airport

**Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**2.2.1.3 Airport Jurisdiction (A020)**

**Field 1: City**

Description: Associated City  
Position: Columns 6-45  
Range: None  
Format: (40)A  
Example: BALTIMORE

**Field 2: State**

Description: Name or 2 character abbreviation of state in which airport is located  
Position: Columns 47-66  
Range: Valid state name as defined in "Input Formats and Specifications of the National Geodetic Survey"

Format: (20)A  
Example: MD

#### **2.2.1.4 Airport Magnetic Declination (A030)**

Note: This record is intended for output to assist in field surveys. The record will be ignored upon input.

##### **Field 1: Magnetic Declination**

Description: East Declination is indicated by negative.  
Position: Columns 5-12  
Range: -180.0 to +180.0  
Format: 999999.9  
Example: -100.0

##### **Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 14-24  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

#### **2.2.1.5 Airport Status (A040)**

##### **Field 1: Vessel Code**

Description: Specifies existence of possible obstructing vessel OIS surfaces (refer FAA NO. 405)  
Position: Column 6  
Range: Y or N - Y, vessel note present, N, no vessel note present  
Format: A  
Example: Y

##### **Field 2: Vessel Code Verified Date**

Description: Most recent Survey Date that Vessel Code was verified  
Position: Columns 8-18  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

##### **Field 3: Survey Date**

Description: Date the field Survey was completed; this record must be the same as the Completed Date of the Survey Task Code (Record T000, Field 4 and with Field 1 = "S") when both are present. If not, the Survey Date will take the value of the last record in which it appears. It is acceptable to set the known flag for this field to "9" (ignore).  
Position: Columns 20-30  
Range: None  
Format: dd-mmm-yyyy where

dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 4: Published Date**

Description: Publication date of Airport Obstruction Chart  
Position: Columns 32-42  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 5: Date of ALP**

Description: Date of original ARP position  
Position: Columns 44-54  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Date of ARP**

Description: Most recent runway end Survey Date used in the ARP computation  
Position: Columns 56-66  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 7: Airport Mode**

Description: Designates the functionality of the airport in relation to the production of various reports  
Position: Columns 68-71  
Range: 0 Open  
1 Closed  
3 Testing  
5 No Obstructions  
7 Discontinued  
Format: 9  
Example: 1

**Field 8: Airport Survey Type**

Description: Specifies the type of survey conducted for the airport  
Position: Columns 73-76  
Range: 1 AOC (FAR-77) - a conventional AOC (FAR 77) survey  
2 ANA - an ANA survey



3	AOC & ANA	- a complete survey for AOC and ANA
4	NAVAID Only	
5	Runway Only	
6	STARS Only	
7	Runway End	
8	OEP	
9	SafeFlight Only	
99	Mixed	

Format: 99

Example: 1

#### **2.2.1.6 Surface Type (A045)**

##### **Field 1: Surface Type 1**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 6-8

Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative

Format: AAA

Example: F77

##### **Field 2: Surface Type 2**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 10-12

Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative

Format: AAA

Example: F77

##### **Field 3: Surface Type 3**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 14-16

Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative

Format: AAA

Example: F77

##### **Field 4: Surface Type 4**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 18-20  
Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative  
Format: AAA  
Example: F77

**Field 5: Surface Type 5**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 22-24  
Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative  
Format: AAA  
Example: F77

**Field 6: Surface Type 6**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 26-28  
Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative  
Format: AAA  
Example: F77

**Field 7: Surface Type 7**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 30-32  
Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative  
Format: AAA  
Example: F77

**Field 8: Surface Type 8**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 34-36  
Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative  
Format: AAA  
Example: F77

**Field 9: Surface Type 9**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 38-40

Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative

Format: AAA

Example: F77

**Field 10: Surface Type 10**

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 42-44

Range: F77 FAR Part-77  
ANA Area Navigation Approach  
RBI Ron Brown Airport Initiative

Format: AAA

Example: F77

**Field 11: Surface Type Surveyed Flag 1**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 52

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

**Field 12: Surface Type Surveyed Flag 2**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 54

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

**Field 13: Surface Type Surveyed Flag 3**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 56

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface  
Format: 9  
Example: 1

**Field 14: Surface Type Surveyed Flag 4**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 58

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface  
Format: 9  
Example: 1

**Field 15: Surface Type Surveyed Flag 5**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 60

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface  
Format: 9  
Example: 1

**Field 16: Surface Type Surveyed Flag 6**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 62

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface  
Format: 9  
Example: 1

**Field 17: Surface Type Surveyed Flag 7**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 64

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface  
Format: 9  
Example: 1

**Field 18: Surface Type Surveyed Flag 8**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered

during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 66

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

**Field 19: Surface Type Surveyed Flag 9**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 68

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

**Field 20: Surface Type Surveyed Flag 10**

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 70

Range: 1 Features were surveyed relative to this type of surface  
2 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

**2.2.1.7 Datum Tie (A050)**

**Field 1: Horizontal Datum Tie Code**

Description: Specifies the accuracy of the Horizontal Datum Tie relative to the National Spatial Reference System (NSRS)

Position: Columns 6-7

Range: See Appendix B

Format: AA

Example: B

**Field 2: Ellipsoidal Datum Tie Code**

Description: Specifies the accuracy of the Ellipsoidal Datum Tie relative to the National Spatial Reference System (NSRS)

Position: Columns 9-10

Range: See Appendix B

Format: AA

Example: B

**Field 3: Orthometric Datum Tie Code**

Description: Specifies the accuracy of the Orthometric Datum Tie relative to the National Spatial

Reference System (NSRS)  
Position: Columns 12-13  
Range: See Appendix B  
Format: AA  
Example: D

**Field 4: Date of Horizontal Datum Tie**

Description: The adjustment date for the Primary Airport Control Station position.  
Position: Columns 15-25  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 5: Date of Ellipsoidal Datum Tie**

Description: The adjustment date for the Primary Airport Control Station ellipsoid height.  
Position: Columns 27-37  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Date of Orthometric Datum Tie**

Description: The adjustment date for the Primary Airport Control Station orthometric height.  
Position: Columns 39-49  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**2.2.1.8 Airport Elevation (A060)**

**Field 1: Airport Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 213.887

**Field 2: Geoid Height (at ALP)**

Description: The difference between the Ellipsoid and Orthometric elevation at the approximate center of the runway. Intended for output to assist in field surveys. Ignored upon input.  
Position: Columns 50-64  
Range: None

Format: 9999999999.999

Example: 134.578

### **2.2.1.9 Reported Elements Record (A070)**

#### **Field 1: Runways Reported Flag**

Description: Denotes whether or not runways are to be reported, and if so, they have been reported

Position: Column 6

Range: 2 runways are not to be reported  
1 runways are to be reported  
3 runways have been reported

Format: 9

Example: 2

#### **Field 2: Nav aids Reported Flag**

Description: Denotes whether or not Nav aids are to be reported, and if so, they have been reported

Position: Column 8

Range: 2 Nav aids are not to be reported  
1 Nav aids are to be reported  
3 Nav aids have been reported

Format: 9

Example: 2

#### **Field 3: OEP Reported Flag**

Description: Denotes whether or not the OEP information is to be reported, and if so, it has been reported

Position: Column 10

Range: 2 OEP is not to be reported  
1 OEP is to be reported  
3 OEP has been reported

Format: 9

Example: 2

#### **Field 4: Obstructions Reported Flag**

Description: Denotes whether or not the obstructions are to be reported, and if so, they have been reported

Position: Column 12

Range: 2 obstructions are not to be reported  
1 obstructions are to be reported  
3 obstructions have been reported

Format: 9

Example: 2

#### **Field 5: STARS Reported Flag**

Description: Denotes whether or not the STARS information is to be reported, and if so, if it has been reported

Position: Column 14

Range: 2 STARS information is not to be reported  
1 STARS information is to be reported  
3 STARS information have been reported

Format: 9

Example: 2

**Field 6: Additional Flag - Reserved for future use**

Description: Year of datum in which positions are expressed

Position: Column 16

Range: Reserved for future use

Format: NA

Example: NA

**Field 7: Additional Flag - Reserved for future use**

Description: Units in which elevations are expressed

Position: Column 18

Range: Reserved for future use

Format: NA

Example: NA

**Field 8: Additional Flag - Reserved for future use**

Description: Year of datum in which elevations are expressed

Position: Column 20

Range: Reserved for future use

Format: NA

Example: NA

**2.2.1.10 Air Traffic Control Tower floor elevation - indexed (A080)**

**Field 1: Point Feature Number**

Description: The number must match a Point Feature Number (Field 1) from an F000 Record. It is implied that the first A080 record is the primary ATCT and that subsequent A080 Records reflect secondary ATCT.

Position: Columns 6-9

Range: 1 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999

Format: XXXX

Example: 1

**Field 2: Elevation, Orthometric**

Description:

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 12138.325

**Field 3: Elevation, Ellipsoidal**

Description:

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 14325.424

**Field 4: Verified Date**

Description: Most recent survey Date that data in this record was verified

Position: Columns 78-88



Range: none  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 5: Source Code, Elevation**

Description: Specifies the source of the Elevation  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.1.11 Airport Reference System (A310)**

**Field 1: Reference System Code**

Description: Reference system in which positions are expressed  
Position: Columns 5-9  
Range: None, value is always 0 (zero)  
Format: 99999  
Example: 0

**Field 2: Zone Code**

Description: Zone for the reference system  
Position: Columns 10-14  
Range: None, value is always 0  
Format: 99999  
Example: 0

**Field 3: Horizontal Unit Code**

Description: Units in which positions are expressed  
Position: Columns 15-19  
Range: None, value is always 5  
Format: 99999  
Example: 5

**Field 4: Horizontal Datum Code**

Description: Year of datum in which positions are expressed  
Position: Columns 20-24  
Range: Year of Datum, 27 or 83  
Format: 99999  
Example: 27

**Field 5: Vertical Unit Code**

Description: Units in which elevations are expressed

Position: Columns 25-29  
Range: None, value is always 1  
Format: 99999  
Example: 1

**Field 6: Vertical Datum Code**

Description: Datum in which elevations are expressed  
Position: Columns 30-34  
Range: Year of Datum:  
29 NGVD 29  
88 NAVD 88  
9001 Mean Sea Level  
9003 Local Tidal  
Format: 99999  
Example: 29

**2.2.1.12 Airport Location Point (A710)**

**Field 1: Longitude**

Description: Longitude with hemisphere represented by sign  
Position: Columns 5-19  
Range: -1800000 to +1800000, values west represented as negative  
Format: DDDMMSS.SSSS where  
-180 < DD < +180  
0 <= MM <= 59  
0 <= SS <= 59  
Example: -1751119.1281

**Field 2: Latitude**

Description: Latitude with hemisphere represented by sign  
Position: Columns 20-34  
Range: -900000 to +900000 values south represented as negative  
Format: DDDMMSS.SSSS where  
-90 < DD < +90  
0 <= MM <= 59  
0 <= SS <= 59  
Example: 245328.7315

**2.2.1.13 Air Traffic Control Tower (A910)**

Note: This Record should not be present in Exchange Format versions beyond version 1.0 (Refer to Record A080)

**Field 1: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 99999999999.999

Example: 13434.977

**Field 2: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 123.333

**Field 3: Verified Date**

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 4: Source Code, Elevation**

Description: Specifies the source of Elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: F

## **2.2.2 Runway Specific Records**

The following records contain information about a specific runway at the airport. Note that each record following the R000 record refers to that specific R000 record. If no R000 record is present, all runway records are invalid. Also any runway records preceding the R000 record are invalid. When the fourth character of the identification code is designated by an asterisk '\*' the valid values specify the end of the runway. The low numbered end of the runway is designated by a one '1' and the high numbered end of the runway is designated by a two '2'.

### **2.2.2.1 Runway Identification (R000)**

**Field 1: Low End Identification Number**

Description: Identifies the low end of the runway, measured from 10 degrees to 180 degrees. Note that the 0 is dropped from the degree reading.

Position: Columns 6-8

Range: 1-18 followed by:

blank - only runway with this azimuth

L - left runway

R - right runway

C - center runway

Format: 99A

Example: 16R

**Field 2: High End Identification Number**

Description: Identifies the high end of the runway, measured from 190 degrees to 360 degrees. Note that

the 0 is dropped from the degree reading.  
Position: Columns 9-11  
Range: 19-36 followed by:  
blank - only runway with this azimuth  
L - left runway  
R - right runway  
C - center runway  
Format: 99A  
Example: 34L

#### **2.2.2.2 Runway Width (R810)**

##### **Field 1: Width**

Description: Width (real) of runway  
Position: Columns 5-19  
Range: None  
Format: 9999999999.9999  
Example: 156.4565

##### **Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

##### **Field 3: Source Code, Value**

Description: Specifies the source of value  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

#### **2.2.2.3 Runway Type (R010)**

##### **Field 1: Runway Type (Surface) Code**

Description: Material used in finish of runway  
Position: Column 6  
Range: P - Paved  
S - Specially prepared, unpaved  
U - Unpaved (not a specially prepared hard surface)  
Format: A  
Example: P

##### **Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 8-18

Range: None  
Format: dd-mmm-yyyy where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
Example: 18-DEC-1996

#### **2.2.2.4 Runway Flags (R02\*)**

Note: Fields 1, 2, 5, 6 and 7 of the R02\* record are ignored if an R\*03 record is found. The R\*03 record is now the preferred method for specifying approach types.

##### **Field 1: Primary Condition**

Description: Primary Obstruction Identification Surface (OIS) (refer to FAA NO. 405)  
Position: Columns 6-8  
Range: See Appendix B  
Format: AAA  
Example: ANP

##### **Field 2: Supplementary Condition**

Description: Secondary Obstruction Identification Surface (OIS) (refer to FAA NO. 405)  
Position: Columns 10-12  
Range: See Appendix B  
Format: AAA  
Example: SUP

##### **Field 3: Runway Vessel Code**

Description: Specifies the existence of possible obstructing vessel OIS surfaces (refer to FAA NO. 405)  
Position: Column 14  
Range: - - None  
        A - Approach  
        D - Departure  
        B - Both  
Format: A  
Example: D

##### **Field 4: Runway Vessel Verified Date**

Description: Most recent Survey Date the Runway Vessel Code was verified  
Position: Columns 16-26  
Range: None  
Format: dd-mmm-yyyy where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
Example: 18-DEC-1996

##### **Field 5: ANA Flag Code**

Description: Specifies whether or not a runway end has an ANA approach and, if so, the type of ANA approach  
Position: Column 28  
Range: 0 - Not an ANA approach

- 1 - ANA category I approach
- 3 - ANA category II/III approach

Format: 9

Example: 1

**Field 6: EOD Flag Code**

Description: Specifies whether or not a runway end has an EOD approach

Position: Column 30

- Range: 0 - Not an EOD approach  
1 - EOD approach

Format: 9

Example: 1

**Field 7: AOC (FAR77) Flag Code**

Description: Specifies whether or not a runway end has an AOC (FAR77) approach

Position: Column 32

- Range: 0 - Not an AOC (FAR77) approach  
1 - AOC (FAR77) approach

Format: 9

Example: 1

**Field 8: Profile Method Flag Code**

Description: Specifies the method used to collect runway profile information

Position: Column 34

- Range: 0 - Conventional profiling  
1 - Kinematic GPS profiling  
2 - photogrammetrically using a DEM

Format: 9

Example: 1

**2.2.2.5 Runway Approach Type (R03\*)**

Note: The approach types reported in Fields 1-10 must be an approach of the general surface type specified in the corresponding field in the A045 record. The Approach Surveyed Flags in Fields 11-20 specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, and must refer to the Approach Types specified in fields 1 - 10 respectively. When a particular approach is flagged as not being considered during the current survey, it means that the approach surface may have been considered during a previous survey and information is being carried forward.

**Field 1: Approach Type 1**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 6-8

Range: See Appendix B

Format: AAA

Example: PIR

**Field 2: Approach Type 2**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 10-12

Range: See Appendix B

Format: AAA

Example: PIR

**Field 3: Approach Type 3**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 14-16

Range: See Appendix B

Format: AAA

Example: PIR

**Field 4: Approach Type 4**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 18-20

Range: See Appendix B

Format: AAA

Example: PIR

**Field 5: Approach Type 5**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 22-24

Range: See Appendix B

Format: AAA

Example: PIR

**Field 6: Approach Type 6**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 26-28

Range: See Appendix B

Format: AAA

Example: PIR

**Field 7: Approach Type 7**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 30-32

Range: See Appendix B

Format: AAA

Example: PIR

**Field 8: Approach Type 8**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 34-36

Range: See Appendix B

Format: AAA

Example: PIR

**Field 9: Approach Type 9**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 38-38

Range: See Appendix B

Format: AAA

Example: PIR

**Field 10: Approach Type 10**

Description: Approach Type refers to the specific type of approach surface used to analyze features.

Position: Columns 42-44

Range: See Appendix B

Format: AAA

Example: PIR

**Field 11: Approach Surveyed Flag 1**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 52

Range: 1 Features were surveyed relative to this approach surface

2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 12: Approach Surveyed Flag 2**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 54

Range: 1 Features were surveyed relative to this approach surface

2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 13: Approach Surveyed Flag 3**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 56

Range: 1 Features were surveyed relative to this approach surface

2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 14: Approach Surveyed Flag 4**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 58

Range: 1 Features were surveyed relative to this approach surface

2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 15: Approach Surveyed Flag 5**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 60

Range: 1 Features were surveyed relative to this approach surface

2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1



**Field 16: Approach Surveyed Flag 6**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 62

Range: 1 Features were surveyed relative to this approach surface  
2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 17: Approach Surveyed Flag 7**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 64

Range: 1 Features were surveyed relative to this approach surface  
2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 18: Approach Surveyed Flag 8**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 66

Range: 1 Features were surveyed relative to this approach surface  
2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 19: Approach Surveyed Flag 9**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 68

Range: 1 Features were surveyed relative to this approach surface  
2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**Field 20: Approach Surveyed Flag 10**

Description: Specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 70

Range: 1 Features were surveyed relative to this approach surface  
2 Features were not surveyed relative to this approach surface

Format: 9

Example: 1

**2.2.2.6 Runway End Position (R40\*)**

**Field 1: Longitude**

Description: Longitude with hemisphere represented by sign

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

-180 < DD < +180

0 <= MM <= 59

0 <= SS <= 59

Example: -1751119.1281

**Field 2: Latitude**

Description: Latitude with hemisphere represented by sign

Position: Columns 20-34

Range: -900000 to +900000 values south represented as negative

Format: DDDMMSS.SSSS where

-90 < DD < +90

0 <= MM <= 59

0 <= SS <= 59

Example: 245328.7315

**Field 3: Elevation, Orthometric**

Description: Refer to the FAA NO. 405

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

**Field 4: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 382.289

**Field 5: Determined Date**

Description: Survey Date that data in this record was determined

Position: Columns 66-76

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 6: Verified Date**

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 7: Source Code, Horizontal Position**

Description: Specifies the source of Horizontal Position

Position: Column 90

Range: See Appendix B

Format: A

Example: F

**Field 8: Source Code, Vertical Position**

Description: Specifies the source of Vertical Elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: F

**2.2.2.7 Displaced Threshold - by position (R41\*)**

**Field 1: Longitude**

Description: Longitude with hemisphere represented by sign

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

$-180 < DD < +180$

$0 \leq MM \leq 59$

$0 \leq SS \leq 59$

Example: -761119.1281

**Field 2: Latitude**

Description: Latitude with hemisphere represented by sign

Position: Columns 20-34

Range: -900000 to +900000 values south represented as negative

Format: DDDMMSS.SSSS where

$-90 < DD < +90$

$0 \leq MM \leq 59$

$0 \leq SS \leq 59$

Example: 245328.7315

**Field 3: Elevation, Orthometric**

Description: Refer to the FAA NO. 405

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

**Field 4: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 382.289

**Field 5: Determined Date**

Description: Survey Date that data in this record was determined  
Position: Columns 66-76  
Range: None  
Format: dd-mmm-yyyy where  
    dd        - 2 character integer day  
    mmm       - First 3 alpha characters of the month  
    yyyy      - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd        - 2 character integer day  
    mmm       - First 3 alpha characters of the month  
    yyyy      - 4 character integer year  
Example: 18-DEC-1996

**Field 7: Source Code, Horizontal Position**

Description: Specifies the source of Horizontal Position  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 8: Source Code, Vertical Position**

Description: Specifies the source of Vertical Elevation  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.2.8 Displaced Threshold - by distance (R51\*)**

**Field 1: Distance**

Description: Distance (real) from endpoint  
Position: Columns 5-19  
Range: None  
Format: 9999999999.999  
Example: 133.324

**Field 2: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 469.845

**Field 3: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405

Position: Columns 50-64  
Range: None  
Format: 9999999999.999  
Example: 356.765

**Field 4: Determined Date**

Description: Survey Date that data in this record was determined  
Position: Columns 66-76  
Range: None  
Format: dd-mmm-yyyy where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
Example: 18-DEC-1996

**Field 5: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Source Code, Distance**

Description: Specifies the source of distance  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 7: Source Code, Elevation**

Description: Specifies the source of Elevation  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.2.9 Stopway - by position (R42\*)**

Note: A corresponding R82\* record should be present to specify the width and width source. If not found, the width and width source will be assumed to be the same as the runway width.

**Field 1: Longitude**

Description: Longitude with hemisphere represented by sign  
Position: Columns 5-19  
Range: -1800000 to +1800000, values west represented as negative  
Format: DDDMMSS.SSSS where  
    -180 < DD < +180  
    0 <= MM <= 59

0 <= SS <= 59  
Example: -761119.1281

**Field 2: Latitude**

Description: Latitude with hemisphere represented by sign  
Position: Columns 20-34  
Range: -900000 to +900000 values south represented as negative  
Format: DDMMSS.SSSS where  
-90 < DD < +90  
0 <= MM <= 59  
0 <= SS <= 59  
Example: 245328.7315

**Field 3: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 469.845

**Field 4: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64  
Range: None  
Format: 9999999999.999  
Example: 382.289

**Field 5: Determined Date**

Description: Survey Date that data in this record was determined  
Position: Columns 66-76  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 7: Source Code, Horizontal Position**

Description: Specifies the source of Horizontal Position  
Position: Column 90  
Range: See Appendix B

Format: F

**Field 8: Source Code, Vertical Position**

Description: Specifies the source of Vertical Elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: F

**2.2.2.10 Stopway Width (R82\*)**

**Field 1: Width**

Description: Specifies the width and width source for the stopway. If omitted, the runway width and width source is assumed to be the same as for the runway. The Date field is ignored.

Position: Columns 5-19

Range: None

Format: 9999999999.9999

Example: 156.4565

**Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 3: Source Code, Value**

Description: Specifies the source of value

Position: Column 90

Range: See Appendix B

Format: A

Example: F

**2.2.2.11 Blast Pad - by position (R43\*)**

Note: A corresponding R83\* record should be present to specify the width and width source. If not found, the width and width source will be assumed to be the same as the runway width.

**Field 1: Longitude**

Description: Longitude with hemisphere represented by sign

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

-180 < DD < +180

0 <= MM <= 59

0 <= SS <= 59

Example: -761119.1281

**Field 2: Latitude**

Description: Latitude with hemisphere represented by sign  
Position: Columns 20-34  
Range: -900000 to +900000 values south represented as negative  
Format: DDMSS.SSSS where  
    -90 < DD < +90  
    0 <= MM <= 59  
    0 <= SS <= 59  
Example: 245328.7315

**Field 3: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 469.845

**Field 4: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64  
Range: None  
Format: 9999999999.999  
Example: 382.289

**Field 5: Determined Date**

Description: Survey Date that data in this record was determined  
Position: Columns 66-76  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 7: Source Code, Horizontal Position**

Description: Specifies the source of Horizontal Position  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F



**Field 8: Source Code, Vertical Position**

Description: Specifies the source of Vertical Elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: F

**2.2.2.12 Blast Pad Width (R83\*)**

**Field 1: Width**

Description: Specifies the width and width source for the blast pad. If omitted, the runway width and width source is assumed to be the same as for the runway. The Date field is ignored.

Position: Columns 5-19

Range: None

Format: 9999999999.9999

Example: 156.4565

**Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 3: Source Code, Value**

Description: Specifies the source of value

Position: Column 90

Range: See Appendix B

Format: A

Example: F

**2.2.2.13 Distance To Boundary - by position (R74\*)**

**Field 1: Longitude**

Description: Longitude with hemisphere represented by sign

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

-180 < DD < +180

0 <= MM <= 59

0 <= SS <= 59

Example: -1761119.1281

**Field 2: Latitude**

Description: Latitude with hemisphere represented by sign

Position: Columns 20-34

Range: -900000 to +900000 values south represented as negative

Format: DDMSS.SSSS where  
-90 < DD < +90  
0 <= MM <= 59  
0 <= SS <= 59  
Example: 245328.7315

#### **2.2.2.14 Distance To Boundary - by distance (R84\*)**

**Field 1: Value (Distance, etc.)**

Description: Distance (real) to boundary from endpoint  
Position: Columns 5-19  
Range: None  
Format: 9999999999.9999  
Example: 325.3443

**Field 2: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 3: Source Code, Value**

Description: Specifies the source of value  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

#### **2.2.2.15 TDZE - output only (R92\*)**

Note: This record is intended for output to assist in field surveys. The record will be ignored upon input.

**Field 1: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 13245.786

**Field 2: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64

Range: None  
Format: 9999999999.999  
Example: 14456.556

**Field 3: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 4: Source Code, Elevation**

Description: Specifies the source of Elevation  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: D

**2.2.2.16 Profile Point Status (R090)**

**Field 1: Runway Identification Number From Which Distance Is Measured**

Description: Runway azimuth varies from 10 to 360 degrees. Note that the trailing zero (0) is dropped from the identification number  
Position: Columns 6-8  
Range: 1-36 followed by:  
    blank - only runway with this azimuth  
    L - left runway  
    R - right runway  
    C - center runway  
Note: Must match field 1 or field 2 of R000 record  
Format: 99A  
Example: 18

**Field 2: Profile Point Type Code**

Description: Software generated type code (can be left blank)  
Position: Column 10  
Range: Software Generated (can be left blank)  
Format: A  
Example: X

**2.2.2.17 Profile Point - by position (R490)**

**Field 1: Longitude**

Description: Longitude with hemisphere represented by sign  
Position: Columns 5-19  
Range: -1800000 to +1800000, values west represented as negative  
Format: DDDMMSS.SSSS where

-180 < DD < +180  
0 <= MM <= 59  
0 <= SS <= 59  
Example: -1761119.1281

**Field 2: Latitude**

Description: Latitude with hemisphere represented by sign  
Position: Columns 20-34  
Range: -900000 to +900000 values south represented as negative  
Format: DDMSS.SSSS where  
-90 < DD < +90  
0 <= MM <= 59  
0 <= SS <= 59  
Example: 245328.7315

**Field 3: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 469.845

**Field 4: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64  
Range: None  
Format: 9999999999.999  
Example: 382.289

**Field 5: Determined Date**

Description: Survey Date that data in this record was determined  
Position: Columns 66-76  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 7: Source Code, Horizontal Position**

Description: Specifies the source of Horizontal Position

Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 8: Source Code, Vertical Position**

Description: Specifies the source of Vertical Position  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.2.18 Profile Point - by distance (R590)**

**Field 1: Distance**

Description: Distance (real) from endpoint  
Position: Columns 5-19  
Range: None  
Format: 9999999999.999  
Example: 121.332

**Field 2: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 9999999999.999  
Example: 485.332

**Field 3: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64  
Range: None  
Format: 9999999999.999  
Example: 384.322

**Field 4: Determined Date**

Description: Survey Date that data in this record was determined  
Position: Columns 66-76  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day  
    mmm - First 3 alpha characters of the month  
    yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 5: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
    dd - 2 character integer day

mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Source Code, Distance**

Description: Specifies the source of Distance  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 7: Source Code, Elevation**

Description: Specifies the source of Elevation  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.3 Feature Specific Records**

The following records contain information about a feature at the airport. Note that each record following the F000 record refers to that specific F000 record.

**2.2.3.1 Feature Identification (F000)**

**Field 1: Point Feature Number**

Description: Unique "number" for a feature which identifies the feature for life of the airport  
Position: Columns 6-9  
Range: 1 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999  
Format: XXXX  
Example: 1

**Field 2: Feature Description**

Description: Description of feature (refer to FAA NO. 405 for allowed abbreviations)  
Position: Columns 11-50  
Range: None  
Format: (40)X  
Example: TREE

**2.2.3.2 Feature Status Record (F010)**

**Field 1: Feature Status Flag**

Description: Specifies whether or not a feature is to be considered as a possible obstruction  
Position: Column 6  
Range: 0 - Active - point is completely active and to be considered for all surfaces  
1 - Disabled (Completely) - the point still exists but should not be considered for any surfaces due to clutter or other reasons; will be deleted from the database when the next edition is created  
2 - Investigate -  
3 - Deleted - the point no longer physically exists and will not be considered for any surfaces; will be deleted from the database when the next edition is created.

- 4 - Disabled for AOC only - the point should be considered for all surfaces except for AOC surfaces
- 5 - Remove - the point still exist but it is recommended by (field surveyor) that it not be published.
- 6 - Disabled for ANA only - the point should be considered for all surfaces except for ANA surfaces
- 7 - Replaced -
- 8 - Inactive - the point still exists but only for historical or informational purposes; is not considered for any surfaces

Format: 9

Example: 1

**Field 2: Accuracy Code**

Description: Specifies the accuracy standard (refer to FAA NO. 405). Note: This accuracy code is for point feature accuracy relative to the FAA 405 requirements for obstructions. NAVAIDS and control points without a top elevation should use the accuracy code "99".

Position: Columns 8-9

Range: See Appendix B

Format: 99

Example: 1A

**Field 3: Point Survey Status Attribute**

Description: Specifies the action performed to verify/determine features in the current survey.

Position: Column 12

Range: See Appendix B

Format: A

Example: S

**Field 4: Control Type Attribute**

Description: Type of Control point

Position: Column 14

Range: See Appendix B

Format: A

Example: T

**Field 5: Navaid Type Attribute**

Description: Specifies whether or not the feature is a navigational aid and/or STARS component and, if so, what kind.

Position: Column 16

Range: See Appendix B

Format: A and some special characters, see Appendix B

Example: W

**Field 6: Special Attribute**

Description: Specifies one or more special attributes

Position: Column 18

Range: See Appendix B

Format: A

Example: T

**Field 7: Feature Survey Type**

Description: Specifies the type of survey for which the feature was surveyed

Position: Columns 20-23

Range: 1 - AOC - a conventional AOC (FAR 77) survey

2 - ANA - an ANA survey

3 - AOC & ANA - a complete survey for AOC and ANA

4 - NONE - surveyed previously for survey of current type but not re-surveyed in most recent survey

Format: 9

Example: 1

### **2.2.3.3 Feature Position (F410)**

#### **Field 1: Longitude**

Description: Longitude with hemisphere represented by sign

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

-180 < DD < +180

0 <= MM <= 59

0 <= SS <= 59

Example: -1761119.1281

#### **Field 2: Latitude**

Description: Latitude with hemisphere represented by sign

Position: Columns 20-34

Range: -900000 to +900000 values south represented as negative

Format: DDDMMSS.SSSS where

-90 < DD < +90

0 <= MM <= 59

0 <= SS <= 59

Example: 245328.7315

#### **Field 3: Top Elevation, Orthometric**

Description: The top elevation will be the highest point of a feature (Refer to the FAA NO. 405).

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

#### **Field 4: Top Elevation, Ellipsoidal**

Description: The top elevation will be the highest point of a feature (Refer to the FAA NO. 405).

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 382.289

#### **Field 5: Determined Date**

Description: Survey Date that data in this record was determined

Position: Columns 66-76

Range: None



Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 6: Verified Date**

Description: Most recent Survey Date that data in this record was verified  
Position: Columns 78-88  
Range: None  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 7: Source Code, Horizontal Position**

Description: Specifies the source of Horizontal Position  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 8: Source Code, Vertical Position**

Description: Specifies the source of Vertical Position  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.3.4 Base Elevation Record (F020)**

**Field 1: Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-49  
Range: None  
Format: 999999999.999  
Example: 469.845

**Field 2: Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 50-64  
Range: None  
Format: 999999999.999  
Example: 382.289

**Field 3: Source Code, Elevation**

Description: Specifies the source of Elevation  
Position: Column 92  
Range: See Appendix B

Format: A  
Example: F

### **2.2.3.5 Reference Elevation Record (F025)**

#### **Field 1: Elevation, Orthometric**

Description: The reference elevation will be one of several kinds of mutually exclusive elevations depending upon the NAVAID flag (F010, Field 5). The possibilities are : Mid-Point Elevation, Phase Center Elevation and ATCT Elevation (only if feature is an ATCT). (Refer to the FAA No. 405)

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

#### **Field 2: Elevation, Ellipsoidal**

Description: The reference elevation will be one of several kinds of mutually exclusive elevations depending upon the NAVAID flag (F010, Field 5). The possibilities are : Base Elevation, Mid-Point Elevation, and Phase Center Elevation. (Refer to the FAA No. 405)

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 382.289

#### **Field 3: Source Code, Elevation**

Description: Specifies the source of Elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: F

### **2.2.3.6 Auxiliary Date (F030)**

#### **Field 1: Auxiliary Date**

Description: Extra date field left over from previous definition of dates. Only used internally.

Position: Columns 6-16

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

### **2.2.3.7 Feature Cross-Reference Record (F040)**

#### **Field 1: Facility ID**

Description: ID of associated Facility

Position: Columns 6-9

Range: Text

Format: AAAA  
Example: SUN

**Field 2: Runway End IDs**

Description: Runway end associated with the navaid  
Position: Columns 11-57  
Range: Runway End ID that matches either Field 1 or Field 2 in any R000 Record; in special cases can be "NON" (for NONE); or can be a list of valid IDs separated by a '/' such as 9L/26R/3.  
Format: 99A  
Example: 34L

**Field 3: Usage Status Code**

Description:  
Position: Columns 59-61  
Range: Possible values are:  
    UNC - UNDER CONSTRUCTION  
    OTS - OUT OF SERVICE  
    NCM - NON-COMMISSIONED  
Format: AAA  
Example: UNC

**Field 4: Z (Elev) offset**

Description: The Z Offset (Field 4) is a value added to the true elevation to reflect the elevation at which the feature should be considered for penetration (Refer to FAA No. 405). This is to accommodate features such as roads or railroads which are themselves at a given, or true, elevation but may have vehicles on them which raises the effective elevation. In this instance, the Z Offset would be the value added to the true elevation to allow for the height of the vehicle. A feature's true elevation is the Orthometric Elevation minus the Z Offset.  
Position: Columns 63-77  
Range:  
Format:  
Example:

**Field 5: source code, for Z Offset**

Description: Specifies the source of the Z Offset  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.3.8 Feature Comment Record - Field Survey (F050)**

**Field 1: Feature Comment, Field Survey**

Description: Comment  
Position: Columns 6-85  
Range: Text  
Format:  
Example:

**2.2.3.9 Feature Comment Record - Requirements (F051)**

**Field 1: Feature Comment, Requirements**

Description: Comment  
Position: Columns 6-85  
Range: Text  
Format:  
Example:

**2.2.3.10 Feature Comment Record - Compilation (F052)**

**Field 1: Feature Comment, Compilation**

Description: Comment  
Position: Columns 6-85  
Range: Text  
Format:  
Example:

**2.2.3.11 Photo ID Record (F008)**

**Field 1: Photo Identification**

Description: Photo ID for Photo Identified features  
Position: Columns 6-45  
Range: Text  
Format:  
Example: SS#1(C)2000

**2.2.3.12 Collection Interface Record (F009)**

**Field 1: Date-Time Visited**

Description: Date-time (any kind)  
Position: Columns 6-22  
Range: Text  
Format: dd-mmm-yyyy hh:mm where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
    hh       - 2 character integer hour  
    mm       - 2 character integer minute  
Example: 18-DEC-1995 13:57

**Field 2: Date-Time Horizontal Position Edited**

Description: Date-time (any kind)  
Position: Columns 23-39  
Range: Text  
Format: dd-mmm-yyyy hh:mm where  
    dd       - 2 character integer day  
    mmm      - First 3 alpha characters of the month  
    yyyy     - 4 character integer year  
    hh       - 2 character integer hour

mm - 2 character integer minute  
Example: 18-DEC-1995 13:57

**Field 3: Date-Time Vertical Position (Top) Edited**

Description: Date-time (any kind)  
Position: Columns 40-56  
Range: Text  
Format: dd-mmm-yyyy hh:mm where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
hh - 2 character integer hour  
mm - 2 character integer minute  
Example: 18-DEC-1995 13:57

**Field 4: Date-Time Description Edited**

Description: Date-time (any kind)  
Position: Columns 57-73  
Range: Text  
Format: dd-mmm-yyyy hh:mm where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
hh - 2 character integer hour  
mm - 2 character integer minute  
Example: 18-DEC-1995 13:57

**Field 5: Date-Time Other Attribute(s) Edited**

Description: Date-time (any kind)  
Position: Columns 74-90  
Range: Text  
Format: dd-mmm-yyyy hh:mm where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
hh - 2 character integer hour  
mm - 2 character integer minute  
Example: 18-DEC-1995 13:57

**Field 6: Temporary Subject to Review Flag**

Description:  
Position: Columns 90-92  
Range: 0 - False  
1 - True  
Format: 9  
Example: 1

**2.2.3.13 Reference to Poly Feature Record (F005)**

**Field 1: Reference to Poly Feature**

Description: The Poly Feature Number of the poly feature to which this point belongs

Position: Columns 6-9

Range: 1 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999

Format: XXXX

Example: 1

#### **2.2.4 Poly Feature Records**

The following records contain information about a specific polygon or polyline feature at the airport. Note that each record following a Poly Feature Class record (P000) refers to that specific P000 record. If no P000 record is present, all poly feature records are invalid. Poly Feature Attribute records (P005) and Feature Comment Records (P05\*) apply to the poly feature as a whole and reference the most recent Poly Feature Class (P000) record. There should be at least 2 Poly Vertex (P010) records for each polyline feature, and 3 Poly Vertex (P010) records for each polygon feature. There is no limit to the number of vertices per feature. Each Vertex Comment (P015) record is associated with the most recent Poly Vertex (P010) record and is intended to provide information about each vertex. The Vertex Comment (P015) record is most useful during a field survey to keep track of what has been done (Example: NW Corner). Poly Vertex (P010) records are expected to be in sequence. The Feature Comment Records (P05\*) and Vertex Comment (P015) records are optional.

##### **2.2.4.1 Poly Feature Class Record (P000)**

###### **Field 1: Poly Feature Number**

Description: Unique "number" for a poly feature which identifies the feature for life of the airport

Position: Columns 6-9

Range: 1 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999

Format: XXXX

Example: 1

###### **Field 2: Poly Feature Class**

Description: A collection of features with similar attributes

Position: Columns 11-90

Range: None

Format: (80) X

Example: Buildings

##### **2.2.4.2 Poly Feature Attribute Record (P005)**

###### **Field 1: Description**

Description: Geometric representation of the feature

Position: Column 6-45

Range:

Format:

Example:

###### **Field 2: Type (G polygon, L polyline)**

Description: Geometric representation of the feature

Position: Column 47

Range: G for a polygon, L for a polyline

Format: 9

Example: G

###### **Field 3: Feature Status Flag**

Description: Specifies whether or not a poly feature is to be considered for the current survey.

Position: Column 49

Range: 0 - Active - point is completely active and to be considered for all surfaces  
1 - Disabled (Completely) - the point still exists but should not be considered for any surfaces due to clutter or other reasons; will be deleted from the database when the next edition is created  
3 - Deleted - the point no longer physically exists and will not be considered for any surfaces; will be deleted from the database when the next edition is created.  
7 - Replaced -  
8 - Inactive - the point still exists but only for historical or informational purposes; is not considered for any surfaces.

Format: 9

Example: 1

**Field 4: Feature Survey Status Attribute**

Description: Specifies the action performed to verify/determine features in the current survey.

Position: Column 51

Range: See Appendix B

Format: A

Example: S

**Field 5: Usage Status Code**

Description:

Position: Columns 53-55

Range: Possible values are:

UNC - UNDER CONSTRUCTION

NIU - NOT IN USE

Format: AAA

Example: UNC

**Field 6: Accuracy Code**

Description:

Position: Columns 57-58

Range:

Format:

Example:

**Field 7: Determined Date**

Description: Survey Date that data in this record was determined

Position: Columns 66-76

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

**Field 8: Verified Date**

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 9: Source Code, Horizontal Position**

Description: Specifies the source of Horizontal Position  
Position: Column 90  
Range: See Appendix B  
Format: A  
Example: F

**Field 10: Source Code, Vertical Position**

Description: Specifies the source of Vertical Position  
Position: Column 92  
Range: See Appendix B  
Format: A  
Example: F

**2.2.4.3 Vertex Record (P010)**

**Field 1: Longitude**

Description: Longitude where sign represents hemisphere  
Position: Columns 5-19  
Range: -1800000 to +1800000, values west represented as negative  
Format: DDDMMSS.SSSS where  
-180 < DDD < +180  
0 <= MM <= 59  
0 <= SS <= 59  
Example: -1235832.1281

**Field 2: Latitude**

Description: Latitude where sign represents hemisphere  
Position: Columns 20-34  
Range: -900000 to +900000, values south represented as negative  
Format: DDMMSS.SSSS where  
-90 < DD < +90  
0 <= MM <= 59  
0 <= SS <= 59  
Example: 245328.7315

**Field 3: Top Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 35-45  
Range: None  
Format: 9999999.999  
Example: 469.845

**Field 4: Top Elevation, Ellipsoidal**



Description: Refer to the FAA NO. 405  
Position: Columns 46-56  
Range: None  
Format: 9999999.999  
Example: 382.289

**Field 5: Base Elevation, Orthometric**

Description: Refer to the FAA NO. 405  
Position: Columns 57-67  
Range: None  
Format: 9999999.999  
Example: 469.845

**Field 6: Base Elevation, Ellipsoidal**

Description: Refer to the FAA NO. 405  
Position: Columns 68-78  
Range: None  
Format: 9999999.999  
Example: 382.289

**2.2.4.4 Vertex Comment Record (P015)**

**Field 1: Vertex Comment**

Description: Comment  
Position: Columns 6-45  
Range: Text  
Format: (40) X  
Example: NW Corner

**2.2.4.5 Poly Feature Comment Record - Field Survey (P050)**

Note: Poly Feature Comment records (P05\*) reference the most recent Poly Feature Class record (P000).

**Field 1: Poly Feature Comment, Field Survey**

Description: Comment  
Position: Columns 6-85  
Range: Text  
Format: (80) X  
Example:

**2.2.4.6 Poly Feature Comment Record - Requirements (P051)**

**Field 1: Poly Feature Comment, Requirements**

Description: Comment  
Position: Columns 6-85  
Range: Text  
Format: (80) X  
Example:

#### **2.2.4.7 Poly Feature Comment Record - Compilation (P052)**

##### **Field 1: Poly Feature Comment, Compilation**

Description: Comment  
Position: Columns 6-85  
Range: Text  
Format: (80) X  
Example:

#### **2.2.5 Miscellaneous Records**

The following records contain miscellaneous information..

##### **2.2.5.1 Chart Reference System (C310)**

###### **Field 1: Reference System Code**

Description: Reference system in which positions are expressed  
Position: Columns 5-9  
Range: 1 - UTM  
2 - State Plane  
Format: 9  
Example: 1

###### **Field 2: Zone Code**

Description: Zone for the reference system  
Position: Columns 10-14  
Range: UTM or State Plane zone code  
Format: XXXXX  
Example:

###### **Field 3: Horizontal Unit Code**

Description: Units in which positions are expressed  
Position: Columns 15-19  
Range: None, value is always 1  
Format: 9  
Example: 1

###### **Field 4: Horizontal Datum Code**

Description: Specifies year of Datum  
Position: Columns 20-24  
Range: Year of Datum, 27 or 83  
Format: 99  
Example: 83

###### **Field 5: Vertical Unit Code**

Description: Units in which positions are expressed  
Position: Columns 25-29  
Range: None, value is always 1

Format: 9  
Example: 1

**Field 6: Vertical Datum Code**

Description: Datum in which elevations are expressed  
Position: Columns 30-34  
Range: Year of Datum:  
29 NGVD 29  
88 NAVD 88  
9001 Mean Sea Level  
9003 Local Tidal  
Format: 99999  
Example: 88

**2.2.5.2 NGVD29 to NAVD88 Conversion Adjustment (C010)**

**Field 1: Conversion Adjustment**

Description: Added to NGVD29 data to convert to NAVD88 data  
Position: Columns 6-12  
Range: None  
Format: 9999.99  
Example: 469.84

**2.2.5.3 Version Number Record (V000)**

Note: Upon input to the National Geodetic Survey Obstruction Chart Database (OCDB), the Version Date (Field 2) will be ignored. An Exchange File which does not have this record will be considered Version 1.00.

**Field 1: Exchange File Version**

Description: Exchange File Version  
Position: Columns 6-12  
Range: 2.000 to 999.999  
Format: mmm.sss, where  
mmm is the major version  
sss is the minor version  
A change in major version number indicates the addition of new records  
A change in minor version number indicates all other changes  
Example: 2.00

**Field 2: Version Date**

Description: Date Version became effective  
Position: Columns 14-24  
Range: none  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**2.2.5.4 Version Format Record (V010)**

Note: This record must be the first record present in an Exchange File

The comma delimited format is similar to the standard format:

- o All fields are the same, where the Record Id field is considered Field 0 for all records. Otherwise, if a record has 5 fields (not including Record Id) in the standard format, it will have the same 5 fields in the comma delimited format
- o There must be a comma following the last field
- o The comma delimited format does not have existence codes. Instead, a field with no characters indicates that the value is not known. A blank is considered a value character.  
For example, consider the Airport Elevation (A060) which has two fields, plus the Record Id Field:  
Field 1 is the "Airport Elevation, Orthometric" and field 2 is the "Geoid Height (at ALP)".  
A comma delimited record of:  
A060,0,134.23 or A060, ,134.23,  
both indicate that the Airport Elevation is 0.  
However,  
A060,,134.23,  
Indicates that the Airport Elevation is unknown

**Field 1: Version Format Record**

Description: Exchange File Version  
Position: Column 5  
Range: S for standard format, C for comma delimited format  
Format: A  
Example: S

**2.2.5.5 Task Status Record (T000)**

Note: When Field 1 (Task Code) = "S", Field 4 (Date Completed) must be identical to the Survey Date Field (Record A040, Field 3) if the Survey Date Field is not blank.

**Field 1: Task Code**

Description: For an exchange file going out to or coming in from a contractor the only possible value is "S".  
Position: Column 6  
Range: S for survey, all other values are for internal use only  
Format:  
Example: S

**Field 2: User**

Description: In general, this is the person or persons who performed the task. If the task was performed by a contractor, this will be a unique six-character NGS assigned contractor identification code and a colon; then optionally followed by the name of the specific person who performed the task.  
Position: Columns 8-27  
Range:  
Format:  
Example:

**Field 3: Date Started**

Description: Date the field survey was begun  
Position: Columns 29-39  
Range: none  
Format: dd-mmm-yyyy where

dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**Field 4: Date Completed**

Description: Date the field survey was concluded  
Position: Columns 41-51  
Range: none  
Format: dd-mmm-yyyy where  
dd - 2 character integer day  
mmm - First 3 alpha characters of the month  
yyyy - 4 character integer year  
Example: 18-DEC-1996

**2.2.5.6 List Record (L000)**

"L" (List) Records are used to contain updated lists (of codes, for example) for selected fields within the exchange file which may change dynamically. Each such record indicates the id code of the exchange file record to which it applies, the field number of the record to which it applies, and the name of a the List File containing a list of codes, descriptions, and other pertinent information. The "other pertinent information" which may appear in a file is of importance and must be applied on a case-by-case basis.

The file name will have 5 character descriptive name and a three-digit version number, plus an extension of .TXT. If the user has on hand a higher version of a given file than that specified the higher version may be used. For example, a file called NAVAD001.TXT could be specified in the exchange file, but the user has NAVAD002.TXT on hand because the list was updated after the Exchange File was created but before the Exchange File was processed. The user may use NAVAD002.TXT.

In general, these files will contain: a file header record (name, date, description of file), data header record(s), a separator record and data records (code, description of code, etc).

The intent is to enable programs which are written to interact with the exchange file the ability to read in certain information instead of embedding information in the program, thus avoiding a rebuild of the program. Such information may be used to provide lists of valid codes, display descriptions of codes instead of cryptic code values, and enable validation.

These records and the associated list files are intended for the most part as an aid to those building software to interact with the Exchange File. One important list file is the NAVAD001.TXT file. This file notes required DEPENDENCIES for features based on the NAVAID code (as specified in the 405).

**Field 1: Record ID**

Description: Record ID of affected record  
Position: Columns 8-11  
Range:  
Format:  
Example:

**Field 2: Field Number**

Description: Field Number of affected field  
Position: Columns 14-15  
Range:

Format:  
Example:

**Field 3: List File Name**

Description: Name of List File  
Position: Columns 18-29  
Range:  
Format:  
Example:

**2.2.5.7 End of File Record (X000)**

No Fields in this Record, only the record type in columns 1-4. Record signals the end of the exchange file and must be the last Record.